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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

O STEEN, DAVID R

ART UNIT PAPER NUMBER

2617

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/905,548	YOON ET AL.	
	Examiner	Art Unit	
	David R. O'Steen	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5,6,14,17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-13,15,16,19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 13, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Cragun (US 5,859,662). As regards Claims 1 and 13, Cragun discloses record/play apparatus and method for extracting and searching index information simultaneously from broadcast signals, comprising: a tuner for selecting a demanded channel from received broadcast signals (fig. 1.101 and col. 3, lines 57-64); a record control part for controlling storage/play of a media stream of a selected channel (fig. 2.207, fig. 2.208, and 2.210 and col. 5, lines 11-29); an indexing engine for extracting index information from the media stream (in this case, the closed captioning converter extracts the closed captioning which is used to index the audio/video, fig. 1.103 and col. 4, lines 1-4); a storage device for storing the media stream inputted from the play control part and the index information extracted from the indexing engine (fig. 1.105 and cols. 5 and 16, lines 26-48 and 6-9); a search/browsing engine (the computer, 1.105) for carrying out search/browsing in accordance with a non-linear multimedia access demand from a user using the stored index information (cols. 15 and 16, lines 60-67, 1-10, and 34-38); and a main control part (the CPU, 2.202) for controlling an entire flow of data and a control signal by receiving a command/control (such as from a keyboard or remote,

cols. 4 and 5, lines 59-67 and 1-2) of the user and producing a required control signal (col. 4, lines 39-58).

As regards Claims 7 and 19, Cragun discloses that the index information extracted from the indexing engine is meaningful/structural/temporal information of multimedia content (col. 2, lines 33-38).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cragun (US 5,859, 662) in view of Barton (US 6,233,389). As regards Claims 3 and 15, Cragun discloses the record/play apparatus and method of Claims 1 and 12 as well as that the main control part further comprises: an input interface for receiving an input of the user (figs. 2.204 and 2.205, cols. 4 and 5, lines 59-67 and 1-2); a controller for processing the index information and producing a control signal for required part in accordance with the index information and the input of the user when index information is inputted from an external source (fig. 2.202 and col. 4, lines 39-58) (it is noted that control signal for storing the index information is produced based on extracting the index information and keywords input from the user [col. 2, lines 45-67]); a decoder for converting the stream stored in the storage device into a stream and outputting the stream (fig. 2.208, col. 15, lines 52-55); and a display control/interface for receiving the

stream and transferring the stream (fig. 116, col. 15, lines 55-57) to a display device (fig. 1.106). Cragun does not disclose converting the *compressed* stream stored in the storage device into an *uncompressed* stream and outputting the *uncompressed* stream; and a display control/interface for receiving the *uncompressed* stream and transferring the *uncompressed* stream to a display device. Barton discloses a decoder (an MPEG decoder) (col.4, line 6) for converting the compressed stream (such as an MPEG stream) stored in the storage device (see col. 3, lines 62-67 of Barton) into an uncompressed stream (such as an NTSC signal) (col. 4, lines 3-4) and outputting the uncompressed stream (such as an NTSC signal); and a display control/interface for receiving the uncompressed stream and transferring the uncompressed stream (see Cragun reference above) to a display device (see Cragun reference above).

Cragun and Barton are analogous art because both come from the same field of endeavor, namely the field of TV signal storage.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to provide the indexing system of Cragun with compression storage of Barton for the benefit of providing compressed storage thereby maximizing storage efficiency.

As regards Claims 4 and 16, Cragun discloses the apparatus and method of Claims 3 and 15 as well as the main control part (a CPU, fig. 2.202) and a separation module (fig. 1.102 and cols. 3 and 4, lines 64-67 and 1) for separating the index data from the media stream when the index information is inputted from the tuner with the media stream but does not disclose that the main control part comprises the separation module. The examiner hereby gives official notice that it would have been obvious at

the time of invention to integrate the separation module with the main control part so as to make the apparatus more compact.

Claims 8-12 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cragun (5,859,662) in view of Maybury (US 6,961,954). As regards Claims 8 and 20, Cragun discloses the record/play apparatus and method of Claims 7 and 19 but does not disclose that the indexing engine, based on extracted index information, stores summary information, key frame information, key region information in connection with the entire temporal information. Maybury discloses that the indexing engine, based on extracted index information, stores summary information, key frame information (such as an imagery frame), key region (or, location) information in connection with the entire temporal information (col. 4, lines 9-25).

Cragun and Maybury are analogous art because they both come from the same field of endeavor, namely the field of TV content analysis.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to add the automated analysis system of Maybury to the keyword searching of Cragun because it gives the user added flexibility in searching content (Maybury, col. 2, lines 8-27 and 41-53).

As regards Claims 9 and 21, Maybury discloses that the meaningful information of the multimedia content extracted from the indexing engine is described in a manner that appearance and disappearance of an object, occurrence and end of an event (by dividing content into segments) (col. 4, lines 14-16), variance of setting (or places) (col.

4, lines 16-20), state change of the object (a type of event cue) are connected to the temporal information (col. 4, lines 4-8).

As regards Claims 10 and 22, Maybury further discloses that the structural information of the multimedia content extracted from the indexing engine includes structural information of the multimedia stream such as scenes and shots (such as a single frame) (col. 4, lines 4-8).

As regards Claims 11 and 23, Maybury further discloses wherein the search/browsing engine provides information required for the user to be able to select a part to be transferred in the multimedia content stored in the storage device based on the index information (fig. 19 and col. 17, lines 25-37).

As regards Claims 12 and 24, Maybury further discloses wherein the search/browsing engine provides summary information of the multimedia content selected by the user based on the index information stored in the storage device (fig. 19 and col. 17, lines 25-37).

Allowable Subject Matter

3. Claims 2, 5, 6, 14, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cobbley (US 5,818,510) discloses a system for indexing broadcast information that includes segmentation, story summaries, and titles. Gupta

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(US 2005/0086703) discloses a method of indexing recorded programming that utilizes key frames and a table of contents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David R. O'Steen whose telephone number is 571-272-7931. The examiner can normally be reached on 8:30 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VIVEK SRIVASTAVA
PRIMARY EXAMINER